LESSON PLANS

COURSE: AP CALCULUS

**LEARNING OBJECTIVES**: Students will be able to find the equation of the slope of the tangent line (derivative) using implicit differentiation.

**MEANING DEVELOPMENT**

Implicit Differentiation

<http://www.youtube.com/watch?v=23nBGx1avXI>

<http://www.youtube.com/watch?v=kmnkhSJZqbo>

**COMPONENTS OF THE LESSON**:

* Video Clips for Meaning Development
  + Differentiate between explicit and implicit
  + With Respect to X
* Interactive Chalk Board Presentation
* Complete Practice and Apply Questions for Initial Practice
* **Technology Integration: fInt(Y1,x,min,max)**
* Virtual Graph
  + Students are to use a graphing utility to show the tangent line to a function defined implicitly. Students are to convert their graph to a picture file and upload it to FlickR. Students are to search FlickR for other related pictures using the creative commons feature.
* Student Video Lectures
  + Students are to create a video lecture. All students are expected to use a media form to show proficiency in the topic. All videos must be at least 5 minutes. Students should include a brief, creative, introduction of the topic and their video. All videos must be posted on the class’ Wiki Page.
* Wiki Page
  + <http://apcalculus305.wikispaces.com/>
* Student Collaborations
  + Students are expected to collaborate on this assignment. Students are expected to make meaningful responses to all discussions and provide meaningful feedback to the submissions of other students in the class.

**EVALUATION / ASSESSMENT**

Wiki Page Rubric Student Video Lecture Teacher Made Test